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ABSTRACT

The collection of papers by Swedish special educators, addresses approaches to helping mentally retarded and multiply handicapped people communicate. The papers are written by psychologists, educators, speech therapists, music instructors, and researchers and focus on the following topics: the context of communication (Mats Granlund), early language communication (Berit Olsson), sign communication (Cecilia Olsson), Amer-Ind (a nonverbal communication method) (Berit Baryd), applications of deaf-blind children's communication training to other disabilities (Barbro Goras), a communication-based model for language stimulation in mongoloid children (Irene Johansson), communication via natural reactions and signals (Gerd Unden), communicating with pictures (Eva Ihre and Annie-Liis Raud), Bliss symbols (Britt Carlsson), PIC (pictogram, ideogram, communication) (Kerstin Falck), function-orientated music therapy (Lasse Hjelm), data communications (Magnus Magnusson), and reflections of a visit to the United States (Gunnel Thunell). The concluding piece is a poem entitled "The Hand I Know" (Ulla Tidestrom). (CL)

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MY BODY – MY WORDS

Gerd Andén and Jane Brodin

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M Y B O D Y -
M Y W O R D S
Communication for the
Mentally handicapped.

The Swedish Institute for the Handicapped

The National Association for Retarded
Children, Young People and Adults.

Even those unused to words
have much to say

Even those who are used to words
may find it hard to speak

We can reach each other with words
but with eyes and hands as well

I look at you
I touch you
Or say
I like you

And you can answer
With words or hand or eye.

From: Dikter Tilsammans, 1972
Benkt-Erik Hedin

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INTRODUCTION

Recent years have seen a marked growth in interest in the possibilities for the mentally retarded and people with multiple handicaps to communicate, and there is an increase in the number of issues raised in this field.

If we are to function as human beings, we cannot afford to lose our ability to communicate with our surroundings. Our most common means of communicating with those around us is by sounds, ie, speech. We also use - more or less unconsciously - both body language and facial expression. People with severe mental or multiple handicaps are often unable to speak and need very intimate contact with those around them if their needs and emotions are to be understood. At times, even the parents may find it very difficult to understand what their child wants to say. The ability to communicate is important not only in the context of the child's language development, but also for his or her development in a more general sense. It is therefore important to help the child find an effective way of communicating as early as possible in its development.

The Swedish Institute for the Handicapped and the National Association for Retarded Children, Young People and Adults (RFUB), are to co-operate in spreading information on communication and the mentally retarded. This book is part of the programme, and aims to provide information on established methods of communication, to create interest in communication, and to put forward evidence that, provided we dare to make the effort, it is always possible to find a way of communicating for everyone. It is our hope that this book will be of benefit to everyone who is interested in learning more about communication and the mentally retarded.

We would like to express our warm thanks to everyone who has contributed to this book, and hope that it will be a source of inspiration for future developments in this field.

Jane Brodin
The Swedish Institute for
the Handicapped.

Gerd Andén
The National Association
for Retarded Children,
Young People and Adults.

Mats Granlund, Psychologist:
THE IMPORTANCE OF COMMUNICATION

People with severe mental and/or multiple disabilities have the same feelings and needs as other people. It is often thought that, because we do not recognise the way in which they are expressed, these people have no feelings and cannot identify their needs.

In fact, they have the same needs and feelings as us, but they have highly individual ways of expressing them. If a person has difficulty in moving his body or in understanding and using the spoken word, he or she will find it difficult to express needs and feelings in a conventional way. Each person will develop highly individual and diffuse ways of expressing themselves, for example, expressing thirst by licking the lips, or waving the arms to express happiness. Great sensitivity is therefore required of the people looking after them if they are to respond to these expressions of needs and feelings. It is vitally important for the individual to receive a response. ALL DEVELOPMENT REQUIRES THAT ONE'S ACTIONS GENERATE A COMPREHENSIBLE RESPONSE. If no response is forthcoming, one's surroundings are perceived as incomprehensible and unpredictable.

To protect themselves from things they cannot understand, people will become retiring and passive.One of the most common problems among the severely mentally handicapped and/or multiple handicapped is their passiveness.

If they are to have a chance of self-development, it is important that people respond to their existing forms of activity, and subsequently develop a communications system together with the individual, one that will be suitable for him or her. ALL ACTIVITY IS COMMUNICATION INASMUCH AS IT TELLS US SOMETHING ABOUT THE INDIVIDUAL. We who populate the individual's world always interpret his actions in some way. Our attitude must be a communicative one, ie the individual's actions must be interpreted as communication. An example is the woman who always squats when she wets herself. The act of squatting can, then, be interpreted as the sign for a full bladder, and the woman can be helped to the bathroom. A GIVEN ACTION ONLY BECOME CONSCIOUS COMMUNICATION WHEN IT REGULARLY GENERATES A RESPONSE.

When the individual is sure that he will receive a response to his natural actions and reactions, a communications system can be built up on the basis of his individual conditions.

At least as important as the appraisal of the individual's personal conditions is an appraisal of the factors in his environment. THE ENVIRONMENT MUST STIMULATE ACTIVITY. This is particularly important in the case of people with severe mental handicaps who, because of their handicap are unable to conceptualize a desired activity. In their case it is essential that their surroundings here and now offer them familiar activities for them to CHOOSE FROM and communicate about. The factor of choice is very important if the individual is to take the initiative in communication, that is to say, want to start to communicate. The severity of the handicap always makes people with multiple handicaps dependent on other people, that is to say, in order to get help they have to adapt themselves to the conditions dictated by the people around them. The act of constantly adjusting to other people teaches the individual to be sensitive to his environment and to react to it.

This can, however make it more difficult for him to identify and express his own needs, that is to say, to act on his own behalf. Therefore, a response to the expression of one's own needs is essential to the development of the ability to take initiatives.

To summarise:
All activity is communication
All development requires that actions elicit a response
Communication becomes deliberate when a regular response is received
The objectives for activity exist in the individual's surroundings

If people with multiple handicaps are to be able to communicate with their surroundings and develop individually-suited communications systems, the following must be examined in the light of the conclusions listed above:

1. THE INDIVIDUAL'S CONDITIONS
   - the use of the senses
   - level of intelligence
   - degree of muscular control
   - the desire and motivation to communicate
   - interests

2. ENVIRONMENTAL CONDITIONS
   - the ability to respond to the individual
   - the amount of stimulus, ie,tips on ideas and activities
   - sensitivity

3. FACTORS AFFECTING THE COMMUNICATIONS SYSTEM
   - similarity with body language and speech
   - how understandable it is to the uninitiated
   - the extent tc which the system can be developed

Berit Olsson, Speech Therapist:

EARLY LANGUAGE DEVELOPMENT

A new-born baby announces its arrival with a cry, and it continues to use cries to signal its needs. The child realises that cries provoke a reaction which leads to the satisfaction of its needs, and gradually begins to use different cries to attract attention. A sensitive person will learn to identify different cries with hunger, pain, or loneliness, for example.

Children are born as active listeners. A child can be seen to react to human speech as early as during its first day. At 4 - 6 weeks the child can recognise a number of different speech sounds which are only marginally different, such as pa - ba. During its first year the child will learn to recognise, distinguish and classify sounds according to the system of its mother tongue.

The child tries to establish eye contact. When adult and child look at each other, the adult often begins to talk to the child. The adult comforts, caresses, jokes and lulls, while constantly emphasising what is said vy varying the tone, pitch and intonation, and by using gestures. And the child listens and learns, noticing what is emphasised most, and the way it is said.

The child's first smile is answered with smils and attention and the child in turn responds with cries and movements of delight. Thus the first sounds are produces that are not signifying discomfort, but are a part of communication with an adult. The earliest babble consists largely of vowel sounds, caused by the vocal cords vibrating in a stream of exhaled air, and different sounds are produced according to the position of the mouth.

At 6 - 8 months the child learns to move the tongue freely in the mouth and to stabilize the lower jaw, which is the first step towards producing a wider variety of sounds.

The child produces its first consonants by blocking the flow of air somewhere in the mouth, often with the lips or by placing the tongue against the alveolar ridge. This produces p, b, t, d, or, if air is expelled through the nose, m, or n. The child begins to develop the ability to produce long strings of sound such as "papapapadada", and its skill improves with practice. The baby's prattle also includes bubbling sounds and sounds not produced by people around it. The child uses its babble partly as a communicative response, but also to amuse itself. It varies the volume, tone and intonation.

The first words are produced at between 12 and 18 months, and the child often goes through a relatively silent period when developing from prattle to deliberate utterances. The child experiences difficulty in producing shorter sequences of sound instead of long streams of babble, and begins to identify certain sound combinations with people and objects.

The first words a child forms are simple ones, consisting of a consonant-vowel, and it prefers repetitive sounds like ma-ma, pa-pa, da-da. Simple sounds which are associated with some characteristic of the object named are easier to remember, like the onomatopoeic words tweet-tweet and bow-wow of baby talk.

The child's first language is simplified because of its limited ability to understand, recall and pronounce.But with the help of understanding adults who know the child and its world, and with the child's own knowledge of emphasis, intonation and body language, it can use a single word to make a statement, a comment, a plea, a question or a demand. And when, in replying,the parent repeats the child's word incorporated in a sentence, the child is given an extended model and confirmation that its message has been correctly understood.

Children acquire language through a process of active research and creative work, by imitating, repeating, questioning and deducing. Its first words are a prelude to a period of intensive vocabulary building. Words have to be sorted and grouped on the basis of different generalisations. Both cats and"bow-wows" have four legs,fur and tails, but belong to different groups, while dachshund and poodle are in the same group.

As the child's vocabulary expands it begins to produce two-word combinations. It expresses itself in telegram form, but not as an adult would; since the child will also omit the inflectional endings. The two-word utterances contain only words that are of semantic significance, usually verbs and nouns and certain pronouns such as "I" and "my". In the Swedish language, which is rich in words beginning with two consonants, words like "tröja" (pullover) become "töja" and "sko" (shoe) becomes "ko" or"to".

On reaching the three-word combination stage the child begins to discover rules governing the way words can be combined and changed according to various inflection patterns. A child who has used the word "feet" correctly may begin to use "foots" instead, because it has begun to apply the plural rule but has not yet discovered that there are exceptions to it. Adjectives such as big, little, angry and silly increase the child's ability to explain things and influence its surroundings. The child practices producing more and better language in a constant interplay with the people around it, but also in talking to itself while at play. The child begins to establish a degree of control over its actions by exhortation, repetition and by "thinking aloud".

At the age of 2 1/2 to 3 1/2 years the child has usually reached the stage of multiple word utterances and has a vocabulary of about one thousand words.

Question words such as "who, where, what", the first prepositions and conjunctions such as "on, in, and" begin to occur. The child is well on the way to mastering its mother tongue. At about 4 1/2 years most Swedish children are considered to have mastered the sounds and sound combinations of Swedish, the basic grammar and a vocabulary of some 1,500 words. Major variations can, however, be found at this level; many children of school age may still have problems with certain of the more difficult sounds and sound combinations.

This is a commendable achievement for a small child - learning something as complicated as a language, and doing it without being able to read and write. The child has now acquired an instrument for processing its experiences, thoughts and feelings, and it can communicate and exchange this information with its surroundings.

Cecilia Olsson, Remedial Teacher

SIGN COMMUNICATION

We have two innate ways of expressing our needs and emotions. The first is by means of sound, which subsequently evolves into speech, and the second is by means of our motor systems, using our muscles to make unidentified movements and gestures which can be developed via body language to conventional signs.

For various reasons, many mentally handicapped people have severe speech defects or are quite simply unable to speak at all, even though they have developed to a state of maturity at which they should be able to both understand and use speech (B-level). Signs, then, are a communication form based on the second innate way we have of expressing ourselves - our motor functions.

Learning to use signs is no harder than learning to speak. There are even plenty of indications that signs are far easier to learn than speech at the early development stage:

- Signs do not require the same degree of development of the fine motor function as speech
- Signs often mirror reality better than speech
- Signs are received by our sight while speech is received by our hearing, which means that signs:
  - are longer lasting
  - are easier to imitate
  - are easier to check and correct

In some respects, signs compare unfavourably with speech:

- Only directed communication can be received, ie,you must see and be facing the person you are communicating with.
- Signs are difficult to use if your hands are busy with something else.

There is no need to fear that the use of signs will impede possible speech development. On the contrary, if there is any effect on speech - which is often the case - it is a positive one. The two are by no means mutually exclusive as methods of communication. The sign is first and foremost an aid in a person's development towards speech. Secondly, it complements inadequate speech ability and thirdly, and only as a last resort, it is an alternative to speech.

What then are the signs used, and how are they used to communicate with the mentally handicapped? SIGN COMMUNICATION (as I have chosen to call this subject) has its origins in the sign language used by the partially and totally deaf,but is NOT identical to it. Sign communication has taken some symbols from sign language and adapted their forms and usage to suit the mentally handicapped:

- There are signs for keywords only. This means that all information is transmitted in speech, but the most important words in the sentence are reinforced by means of signs.
- A sign can signify several notions which are synonymous or closely related in meaning.
- Single signs can be simplified
  in their motions
  by simplifying compound signs
- Abstract signs can be replaced by more concrete signs.
- Signs which are similar can be altered to avoid confusion.

It is important that the teaching of sign communication does not become a separate subject, but a form of communication that has a practical use beyond the classroom and clinic. The mentally handicapped can be helped to standardise their use of signs by introducing variety into their direct training, for example:

- by co-ordination with other school activities.
- by training in groups with other students of sign communication.
- by giving individual training in a clinic.

As a rule, all new signs are learnt in a natural situation and with reality as the basis of the symbol. It is therefore important that sign teaching is integrated into the teaching of other subjects. Individual teaching in a clinic is mostly used to revise and consolidate the signs with the aid of visual material. An extremely important part of the training is indirect, that is to say, the people closest to the pupil, the teachers, nursing staff, parents and school assistants, should understand and use signs. In order to encourage and promote the intensive use of signs, the students should form a group both at school and in the student home.

It often happens that mentally retarded people understand signs (as they do speech) passively but do not demonstrate the ability to imitate. Imitation is often a prelude to the spontaneous production of a sign. The step from passive understanding to active use of signs may require an intermediate stage of active physical assistance, that is, the manipulation of the pupil's hands to help him form the sign. The amount of assistance can gradually be reduced and the next stage is that the student himself uses signs, either by imitating, or in referring, which means that the sign is used as a linguistic symbol to refer to, for example, an object or event. When signs are used in the latter way, they can be regarded as a useful method of linguistic expression.

To summarise, it can be said that the following are the most important conditions to be met if sign training is to improve the communication ability of the mentally handicapped:

- The training must be adapted to the conditions and requirements of each pupil.
- The language must be an effective one, ie, a mentally retarded person must be able to use the communication system to make himself understood.
- The language model must have a high use frequency - the people close to the person using signs should make the greatest possible use of signs with speech.

Berit Bjryd, Aphasia Disabled Instructor
AMER - IND

Amer-Ind Code is a thought-related, non-verbal method of communication intended for people who are unable to communicate in language. Amer-Ind is easily understandable, irrespective of a person's language, education and cultural background. Thus Amer-Ind is not a language but a system of signals. It is a simple, concrete and logical system without words or grammar. There are 250 signals, representing different concepts.These primarily express an activity, something that is done, e.g. sleeping, lying down, resting. The same signal is used for tired, sleepy, bed, and so on. Most of the signals are very closely related to natural body language and are frequently used by people without any handicaps at all to reinforce spoken language.

Amer-Ind can be used at many different levels. Primary needs and desires can be expressed using a small number of signals. These can be combined and, if one is very skilful, the system can be used as a language. However, it is intended to be a way of achieving an improved, successful communication for people with brain damage.

WHAT CATEGORIES OF HANDICAPPED PEOPLE CAN BENEFIT FROM AMER-IND?

The method is in use in the USA and on a test basis in Sweden and other countries among the following groups:

1. SUFFERERS FROM ACUTE DYSARTHRIA (speech impediments). A simple system is required for everyday communication. The language function is intact and in certain cases written communication can be produced, but this is far too time-consuming for normal communication.

2. APHASIA PATIENTS, who have lost their language function as a result of brain damage. Measures are primarily directed towards restoring language ability, but in certain cases brain damage is so extensive that an alternative method such as Amer-Ind is introduced instead. In cases where traces of language ability remain, Amer-Ind can act as a complement to language to give improved communication ability. For aphasia patients with major difficulties in understanding both spoken and written language, Amer-Ind can be a way of transmitting information to the patient. The ability to understand gestures and body language is usually better-preserved than the ability to understand language.

3. MENTALLY RETARDED people have, in some cases, responded to treatment with Amer-Ind, resulting in varying degrees of improvement in communication, sometimes using only a few signals, while others have learnt to use all the signals at a high level. Training is carried out in natural situations and the student is motivated by showing the student that communication is necessary. This method has been tried out on a very few people in Sweden.

THE ORIGIN OF AMER-IND.

The name derives from"AMERican INDian Hand Talk".

The method is based on the Indians' "hand talk" which evolved many thousands of years ago during the great Indian migration from Asia to America. Each Indian tribe had its own language and a simple method of communication between the tribes was needed. "Hand talk" evolved, based on easily-understandable mime. The signs that were easy to understand continued in use while gestures that failed to communicate easily were forgotten.

There were 550 different languages in North America and hand talk became the prevalent way of communicating until as recently as the 1800s. Immigrants from Europe learned to understand and use it and communicated in it as settlers in their contacts both with the Indians and with other immigrants from Europe.

Amer-Ind has been developed by MADGE SKELLY-HAKANSON PhD, Cleveland, Ohio, USA as an alternative method of communication for people with brain damage. An Indian by birth, she learned as a child to use hand talk as well as the Indian language of her tribe,and French. She trained as an actress and also studied languages - she is fluent in five languages. In time, Madge Skelly became interested in the handicaps which caused shortcomings or total inability to communicate with gestures, speech and language - the fields in which she herself was so proficient. At the age of 50 she qualified as an American speech therapist and took her PhD. She took a professorship at the University of St. Louis and headed a department for people with communication handicaps at a research hospital which specialised on neurological illness.

After her "retirement" some 15 years ago, Madge Skelly developed the Amer-Ind Code in co-operation with a number of Indian chiefs. Her first tests of this method were on dysarthria and aphasia patients. She later became the head of a corresponding department at a major hospital for the mentally handicapped at St. Louis, where she introduced the Amer-Ind Code. She and her colleagues met with considerable success in the methodical training of patients with very severe communication handicaps.

During the last ten years Madge Skelly has taught her method in various parts of the USA, Canada, Australia and in a number of countries in Europe. She has made several visits to Sweden since 1980 and has now moved to Cleveland, Ohio, where she is associated with the hospital and university of that city.

METHODS

Training is carried out in natural situations, where there is a need to communicate. Madge Skelly considers that people with severe brain damage who are unable to communicate with language can benefit to a greater or lesser extent from Amer-Ind Code for the simple reason that it is not a language.

For several reasons, teachers of the Amer-Ind Code should not speak while they are signalling:

1. The objective is to improve communication by means of Amer-Ind signals.

2. Since Amer-Ind is not a language, it is difficult to make a direct translation of an Amer-Ind message.

3. The therapist should act as an example for his students and show that the system works without having to use his superior linguistic knowledge.

4. Receiving several different types of stimulus simultaneously can present a problem. If the student knows that he can concentrate on the hands only when receiving a communication, then he need neither listen nor try to look at both the hands and the mouth to understand the message.

This does NOT mean that one should stop talking to people with brain damage. However, one should try to establish the student's ability to understand language, and WHEN USING AMER-IND, THERE SHOULD BE NO TALKING DURING SIGNALLING.

The ability to use Amer-Ind is rated on ten levels. The first is, for example, the ability to understand a signal, the second is the ability to repeat it, at the fourth level a signal is remembered, and so on.

A person's ability in Amer-Ind can be measured and expressed as a percentage by counting the number of signals that the student has mastered at the different levels. To reach 100% ability, all 250 signals must be mastered at level 8, that is to say, that Amer-Ind can be used as a language.

There is some doubt whether language stimulus should be reduced when dealing with small children. However, Amer-Ind training should be limited to very short periods of one or two minutes only, and I personally find it very hard to believe that a child's development will be limited if it receives no language stimulus during this short time. But is is important to underline that the method should only be used to a very limited extent with small children. Amer-Ind is largely used with mentally retarded adults.

Even though no language stimulus is given during Amer-Ind training, the gestures often stimulate the students' speech ability, so that some students will speak while they are signalling. Amer-Ind treatment aims to improve communication ability. In certain cases, it also has the effect of improving speech and linguistic skills.

Barbro Giöras, Consultant for the Deaf-Blind:

DEAF-BLIND CHILDREN'S COMMUNICATION AND TRAINING - POSSIBLE APPLICATIONS FOR OTHER COMMUNICATION-HANDICAPPED CHILDREN.

A limited ability to contact and interact with their surroundings is common to all children with impaired vision and hearing. Communication between people depends to a high degree on sight. The interaction between the deaf-blind child and its mother (or person caring for it) is often disrupted as early as in the first months of the child's life.

Neither can hearing compensate for loss of sight, and therefore a combination of both these defects will retard linguistic development, as well as retarding or disrupting the child's general development. Therefore communication must be based on the other senses,and any residual sight or hearing should be stimulated and used to the full. This means that those of us who work with these children should take full advantage of each child's possibilities of contact with its surroundings, and we must be receptive to any alternative channels of communication.

The channels of communication are:

Input	Output
1. hearing	sound, words
2. sight	motor system, by gestures
3. hearing	motor system, by gestures
4. sight	sound, words
5. touch	motor system, (signs - hand alphabet)
6. touch	sound (Tadoma method)
7. hearing	pictures
8. sight	pictures

Both knowledge and experience is required to establish which channels of communication can be used. It is also essential to determine the level of language development, so that the child can be given a programme that is adapted so that it is comprehensible and meaningful. For example, is the child sufficiently developed to be able to correct itself (inner feedback), or how does the memory for linguistic sequences function at different levels? At what point can we begin articulation exercises, etc?

At the beginning of language development, the child's language is the motor system - body language. Interaction and communication are based on the ability to interpret and reinforce the child's signals. If we fail to recognise the signals there is a considerable risk that the child will become withdrawn and give up. If we are unsure what the child wants, we adults have to play the detective and get to the bottom of the misunderstanding. The child's body language is developed by involving it in various forms of muscular activity together with an adult.

The development of the childs motor system is often very one-sided because of its lack of experience and its inability to imitate spontaneously. Even if some children are expert "acrobats", they don't perform together with anyone. Imitation requires close physical contact between child and adult. A small child at an early stage of development attaches great importance to the movements of its body. We adults should respond to the child and encourage it to perform movements together with us, for example,

by sitting on the floor behind the child and carefully beginning a rhythmic rocking motion. The child feels the movement. We stop, and see if the child shows a desire to continue.

It expresses itself by gesturing with its body or its hand or by changing its breathing rhythm.

You understand the message and, using signs and speech, say, "Yes, you want to rock some more".

Repeat this many, many times.

The foundation has been laid for the understanding of a concept.

If the child is to reach a fuller understanding of the concept, it must be exposed to the sign(rock) in many contexts, for example, being rocked on your knee, in a rocking chair, sitting and rocking from side to side, rocking in a hammock etc.

Try different verbs of movement, as they often correspond to the child's needs and interests, for example:
Spin, jump, roll, crawl, walk, run, climb, ride, and so on.

At a later stage the child will have learned more activities. Build a ring of instruments which relate to different physical activities. Start, for example, with only two activities, for example riding - jumping. The ring can be expanded later to include numerous different activities.

Begin and end with whichever activity attracts the child most. The game should entice and stimulate and reflect the child's needs so that he or she will want to play it again. " I know what you want. You want to ride some more. What are you going to do? Yes, you're going to rock." We have begun to communicate.

Physical games must be highly individualised and adjusted to suit each child. Then the activities may be introduced in a sequence. "FIRST you're going to ride, and THEN you're going to jump".

WE WANT TO TEACH THE CHILD TO THINK AND TO REMEMBER in a certain order: series - sequence.

This is intended to make the child realise the importance of a repeated series of events so that reality is presented as a whole and not in parts. It is easiest to make use of everyday events like getting dressed in a particular order, or helping to lay the table.

a) fetch a plate
b) fetch a plate and spoon
c) fetch a spoon and glass

And later to go on to:

a) shopping for food
b) cooking
c) laying the table
d) eating
e) washing up.

If we don't arrange life for the deaf-blind child, it will live in a world of chaos. To bring order from this chaos we have to create a rhythm, and thereby an EXPECTATION. We achieve this by planning each day and week according to a pre-determined and recurring schedule.

To give the world an even clearer shape, we make use of the SIGNALLING EFFECT of objects, for example:

bib signals food
mug signals drink
diaper signals lavatory
hat signals an outing.

If we want to tell a child that it is going to have a drink and we are unable to make ourselves understood by means of speech, signs, gestures or pictures, we have the child feel the mug, giving it direct experience of a natural movement, and then let it drink immediately, so that the child will have the opportunity to express itself if, for example, it is thirsty and hasn't a sufficient command of the language to express its need. This use of the signalling effect of objects also creates an expectation that something will happen. Expectation is our first perception

of time, which must exist if there is to be any linguistic development. Objects should subsequently be used in a more organised way in a wider time perspective to illustrate the daily and weekly routines of activity, because the ability to anticipate creates security and harmony, not only for the future, but in one's perception of the past.

To summarise, the total of our experience at Ekeskolan is that this method has reinforced and developed an understanding of the world in deaf-blind children. It is our hope and our belief that this method can also benefit children with other forms of communication handicap.

Irēne Johansson, Researcher:

A COMMUNICATION-BASED MODEL FOR LANGUAGE STIMULATION IN MONGOLOID CHILDREN

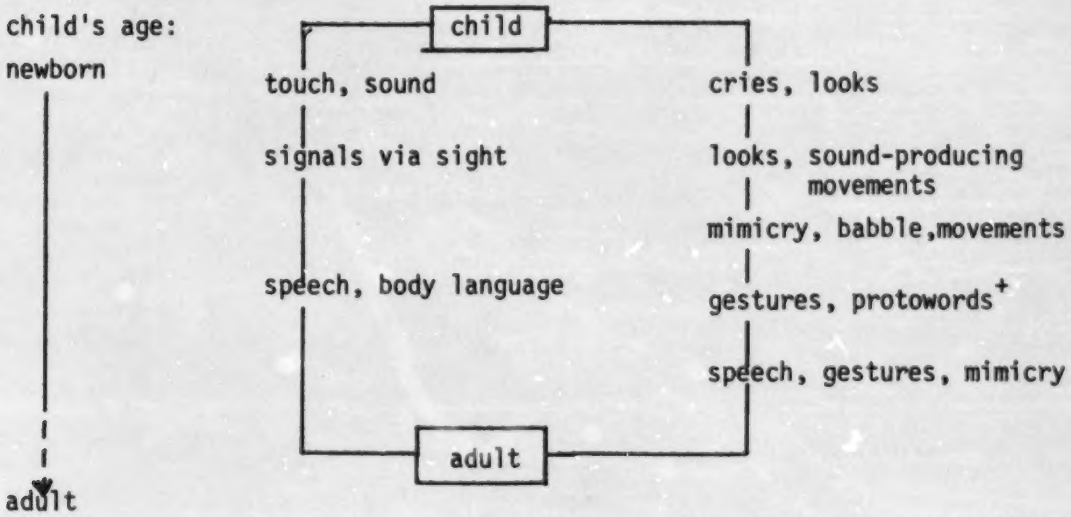
Mongoloid children have severe language and communication problems. (Johansson 1981, 1983). Only a very few of these children ever manage to achieve relatively good speech and linguistic levels themselves, while the vast majority of them, even as adults, have difficulties in understanding speech, forming grammatical sentences or making themselves understood, ie, producing correct utterances.

A project was started in 1981 on the early and systematic stimulation of communication in mongoloid children. Today the project includes 30 children aged from 4 months to over 3 1/2 years.

Communication stimulation is arranged to coincide with normal sequences of development, but the mongoloid children are treated as if they were partially or totally deaf. Among other things, this means that speech and sign language are always used together.The development of these children's communication ability is seen as an integrated part of their development as a whole. An important basic principle is that speech is seen as one part of a more comprehensive development of communicative ability, a process which begins at birth and continues throughout life. The child has other

methods of communication and communication skills before speech begins to develop properly. These earlier stages of development are regarded as necessary precursors of speech.

The communication model which the stimulation programme is based on has the following primary headings:



+a sound similar to a word and which partly covers a situation.

The child is exposed to continuous stimulus as early as possible, so it should be provided by one of the adults close to it (parents, a child minder, the day nursery staff). The adult works closely with an instructor with whom he or she has frequent contact (weekly).

The stimulus model covers communication both to and from the child. Among other things, this means that the adult is made aware of the weak and often indistinct communicative signals from mongoloid babies and infants. On the basis of the communication model described above, the aims and the implementation of stimulation can very roughly be summarised under the following headings:

Child's age:

newborn

1. Distinction through hearing, eyecontact, massage, co-ordination of eye and ear.
2. Distinction through hearing, sensory and motor stimulation (particularly the eye and hand),massage.
3. Distinction through hearing, stimulus of babbling, motor and cognitive stimulus (particularly symbols).
4. Speech comprehension, auditive discrimination, simple instructions, 10-15 common words/signs.
   productive: protowords/signs, babble in the transitional stage.
5. Speech comprehension: 50 common words/signs, what, who, where questions,
   productive: 20-25 common words/signs (nouns, proper nouns, designatory words).
6. Speech comprehension: noun + verb + object
   productive: 40-50 words/signs (nouns, verbs), one-word utterances, designatory words + key words of purpose, limited sound production and word/syllable types.
7. Speech comprehension: longer and more complex utterances.
   productive: multiple word utterances, all word classes, regular inflexion systems, the complete range of sounds except the full mastery of the aspirates (e.g. s, t, sch, ch), limitations in combining words and syllables.

schoolchild

Gerd Andén, Ombuswoman for Multiple Handicap issues:

COMMUNICATION BY MEANS OF NATURAL REACTIONS AND SIGNALS

Sara is a ten year-old girl who, because I am a friend of her mother's, I have known all her life. She is a delightful, pretty, cuddly girl with large blue eyes and soft, peachy skin. She is tall and slender like her mother and has her father's thick thatch of fair hair. She has a bright, infectious smile. Sara is a happy and secure child who trusts those around her and believes that the world is a benign place, which is why her smile is still bright.

Sara is totally paralysed and only moves in her spastic spasms. Sometimes, when her body is tormented with pain, great tears roll down Sara's cheeks. She is comforted by those around her, who help her with medicines, and she bears these periods of pain bravely. Between these attacks she is calm and happy, and she experiences all the usual emotions.

She has many interests, for example listening to stereo music. She loves "Fame" and crows enthusiastically to that kind of music. She cannot speak and is severely mentally retarded. Her "speech" and "singing" consist of simple sounds - often a monotonous babble.

The walls of her room are covered with gold paper which reflects the light from the window and from her lamp. Sara is almost totally blind; all she can discern is darkness and light. When her mother plays with her by shining a torch onto the gold paper her eyes widen with suprise and she yawns and dribbles with interest. The her mother places Sara's hand on the torch with her own so that Sara can hold it too, and feel the movements that produce the remarkable play of light on the walls. Her whole body tenses with eagerness.

Sara's secure world is peopled by her mother and father, two children's nursing assistants who visit her from time to time and her training school class with its teacher, two assistants and four classmates. And, of course, she also meets the family's circle of friends, and neighbours.

It is often Sara who decides what the family is to do. Her needs and wants even control her parents' lives because she is dependent on their constant support for her life and the satisfaction of her needs. In her own world, Sara is able to communicate,because people are sensitive to her,and by experience, she has learned how to communicate. She cannot express herself in speech, nor by any of the sign languages because her hands and arms are paralysed. She can't use Bliss or Pictogram because she is blind and she cannot understand symbols because she is severely mentally retarded. How does she communicate? And how do, for example, her parents respond?

She uses sound and movement "in her way". That is to say, sounds such as babble, laughter, cries,and movements such as mimicry and tensing her body. By using these in various combinations, she can express a great deal to people who know her and who make the effort to understand. She can express YES by a "that's good" smile and NO by a "that's wrong" cry. These can be produced in many shades of meaning from a small, satisfied smile to a roar of laughter, and from a grimace of dissatisfaction to tears and bellows. She expresses her emotions and needs most frequently in concrete situations. These may be hunger, thirst, sleep or the lavatory. Her emotions are all degrees of sorrow, worry, pain, rage, joy, serenity, love and so on.

An example:
Sara seems to be troubled. There is a dark expression in her eyes, she is frowning, her mouth is pouting and she is whimpering. This is her usual reaction to a feeling of physical discomfort. Her mother comes over to her and says, questioningly, "You're telling me that something's wrong. WHAT is it?" - Sara whimpers. Her mother considers the most likely causes for Sara's present condition . She has just eaten and changed her clothes for an outing. Her shoes are new. Mother asks "Are your shoes pinching you? Do your feet hurt?" She takes the shoes off - but Sara goes on whimpering. So, it isn't her feet. "is your diaper twisted and chafing you?" Mother checks and is satisfied that it is comfortable. - Sara whimpers. Mother thinks she can hear Sara's stomach grumbling, so she touches her stomach and asks, "Have you got a stomach-ache?" SARA STOPS WHIMPERING. She HAS got a stomach-ache. There are still troubled lines between her eyebrows. Her mother fetches the Novalucol, a stomach medicine Sara sometimes takes, and gives her a dose. When she tastes that it is the RIGHT medicine, she smiles, even though it tastes bad. Shorthly after, she belches and her frown disappears - Sara's stomach-ache has gone.

It is very hard for Sara to take the initiative herself. The people around her must invite her to take part in activities. For example:
Sara is sitting apathetically in her wheelchair, looking bored and sleepy. Her nursing assistant tries to think of something that can interest her. She produces a guitar, takes Sara's hand in hers and plucks the strings with Sara's index finger. Playing the guitar is usually great fun for Sara but now she is still half asleep, and her hand is completely relaxed. She doesn't seem to be the least interested in what is going on. Her nurse then tries to think of something else to do with Sara. She takes her to the bathroom and fills a bowl with water for her to play with - usually a very popular pastime with Sara. But she is still indifferent when her hand is dipped into the water and she feels her favourite toys in the bowl. A walk, perhaps? The nurse asks Sara if she wants to go out,and fetches Sara's anorak. As soon as she hears the characteristic rustling of her anorak's nylon fabric, Sara wakes up and begins to laugh. SHE WANTS TO GO OUT. And she is not tired at all any longer.

Sara has a "contact book" in her school satchel, in which the teacher writes an account of Sara's activities during the school day for her

parents to read. Sometimes she brings home something she has made at school. When Sara comes home her mother reads the teacher's note and asks Sara what she did at school that day.

Sara then uses facial expressions to describe her day. If it has been a hard day, she uses an expression of fatigue or sorrow. If everything went well, she smiles and laughs. When her mother praises the "thing", for example, a clay dish or a paper bird that Sara helped to make, she glows with pride over HER thing and chuckles and laughs with happiness when she is helped to touch it with her hands.

There must always be someone on hand to help Sara, even during the night, when she will "call" for her parents through an intercom which has been wired between her bedroom and her parents'. When she needs help to turn over, she"calls" them: when she is in pain she cries out, and when she is frightened, she shouts for them. When she wants someone to talk to, she will laugh and call. When her parents answer her through the intercom, "I hear you, I'm coming", she will quieten down and wait. If they don't come soon enough, she will begin to call again until someone is with her.

People speak to Sara quite a lot, although they don't know whether she understands the words. Whether she does or not, the habit of constantly describing what one is doing,and talking to her,gives her the chance to learn words. Her parents use a special tone of voice and enunciate very clearly , melodically and brightly when they talk to Sara. One can see that she reacts when she hears the tone of voice they use with her, and she pays particular attention to what is being said. One also takes pains to try and reinforce words with concrete actions (signs), for example touching her stomach when talking about it.

Since Sara uses her hearing more than any other of her senses in contact with her surroundings, it is important that she receives "pure" sounds, ie any background noise must be avoided as it spoils her chances of receiving finer shades of sound. Sara gets a lot of pleasure from music, but the sound of background music tends to isolate her from her surroundings.

It is often very hard to determine how much Sara understands. Although hers is a major and complicated brain injury, parts of the brain may be quite unaffected. Her acute epilepsy and the strong medicines sometimes make her unnaturally tired. At certain times and on certain days it is very hard to activate her or communicate with her - on other days she is so alert and her reactions are so fast that one can clearly see that "in her way", she understands a great deal of what is being said.

But that is the way we all are at times - even though we show it differently. I last met Sara on one of her good days. It was her mother's birthday and the family threw a party. Sara smiled and glowed the whole evening. She laughed at funny stories in the right places and listened closely to everything that went on. A joyful and happy atmosphere can be felt even without words.

Eva Ihre, Speech Therapist and Anne-Liis Raud, Speech Therapist

COMMUNICATING WITH PICTURES

Those of us who are involved in the care, treatment and teaching of people with serious speech and language handicaps are often asked if there is any kind of communication aid in the form of pictures. Pictures can, in many cases, be a good introduction to graphic communication or they can be an alternative if,for example, letters, Bliss-symbols or Pictograms prove to be too abstract for the patient/student.

The pictorial material we have developed is intended to serve two purposes. Its main purpose is as a pictorial communication aid for adults suffering from aphasia and/or dysarthria, disabled children and adults, and mentally handicapped children and adults. The material is also intended for use in training these groups.

Our efforts to design pictorial material began on a modest scale in 1980 at Huddinge hospital in Stockholm. With help from the Swedish Institute for the Handicapped, the material eventually evolved into a total of 224 black-and-white drawings in three different formats.

In the spring of 1982 the material was tested and evaluated by five speech therapists in co-operation with 15 patients from the above-mentioned groups. The evaluation was carried out by means of interviews and questionnaires. The findings of the evaluators gave us greater insight into the abilities required of the user. These are the ability to see, to process information, to indicate, and the will and motivation to communicate. Here, the ability to process information refers to the brain's ability to convert an optical pattern into a picture which conveys meaning.

The ability to indicate refers to the patient's ability to communicate which picture he is indicating.

During our work on this project we also observed that the appearance of the pictures is important in producing clear and unambiguous understanding of the communication. The following are some of the factors that were found to be important:

- a clear contrast between the subject of the picture and the background
- clear lines and contours
- realism
- maximum redundancy

SUBJECT-BACKGROUND. The human brain is organised to make a limited selection from multiple input of stimuli, which it then concentrates on. However, people with symptoms of even minor brain damage often have demonstrable difficulties in concentrating on a single object if it is surrounded by other visual stimuli. Thus, the most effective pictures are those with a uniform, uncluttered background.

CONTOURS. Pictures with sharp, clearly-defined contours which make the subject stand out are more suitable than pictures with poor definition and diffuse edges.

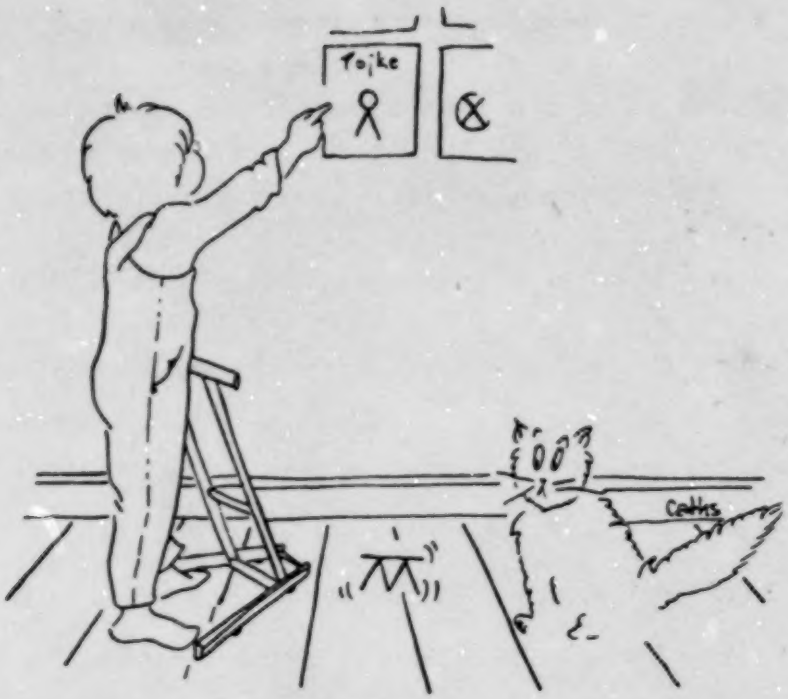
REALISM. Pictures that are realistic and show all the significant details are preferable. Three important factors which help to make the picture realistic are correct proportions, correct shadowing and the correct perspective.

REDUNDANCY. Here, this term means an excess of information. A simple line drawing or sketch, for example, has a low redundancy factor; the viewer must, so to speak "fill in" in order to receive the information that is being offered. A picture with high redundancy, which is very informative, is therefore preferable when working with people with brain injuries.

We attempted to meet these four criteria when developing the material. We felt that there was a general tendency when designing visual materials to concentrate on linguistic models at the expense of picture quality. Perhaps everyone who uses pictorial material in their contact with people suffering from brain damage should discuss, and make a critical appraisal of, the quality and technical properties of the material they use?
Relatively little research has been done in the field of pictures as a communicative aid. It can, however be said that in general, the professional people we met showed their approval of this material.
A number of case studies indicate that it has several areas of use, both as a communicative aid and as teaching material.

Britt Carlsson, Remedial Teacher

BLISS COMMUNICATION



The Bliss system, created by C.K. Bliss, 1942 - 1965, is a graphic system of symbols in which words and concepts are represented by logical pictures instead of letters.

The system was originally intended to be a means of communicating across language barriers - published in the book "Semantography" - but has been used mostly as a communication aid for people with speech defects.

People with very indistinct speech, or who are mute, but can read and write,can use alphabet boards,Canons communicator and suchlike, but many of the people who have speech defects have a low degree of literacy and cannot use letters for communication.It would seem that the abstract symbols of letters are far more difficult to learn than the more concrete system of Bliss symbols.

The Bliss system consists of a small number of basic symbols, some being clear depictions of objects, while others have a more logical-philosophical content. By combining these symbols any word imaginable can be formed to constitute a language that can be used at various levels -from

communication at the level of signal words to the use of complete grammatical structures.

In its simplest form, the system can be used by pointing at symbols which are usually mounted in a grid on a chart. Different groups of symbols are colour coded on the chart to make the system easier to use. Each symbol is labelled with its word so that a symbol-user can communicate with people who have no previous experience of this method.

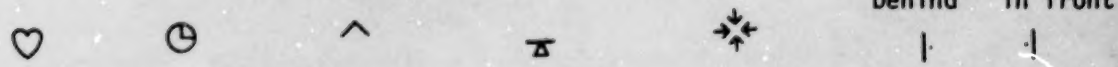
The Bliss system has different categories of symbols. There are:

1. Pictorial symbols, ie, they depict the objects they represent:

house car man woman chair eye water

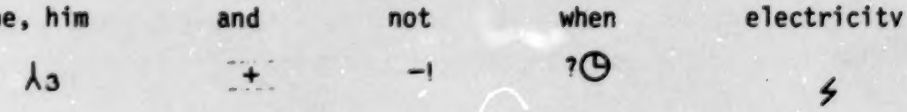
2. Ideographic symbols, ie, they represent and illustrate an idea:

feeling time protection weight collection after, behind before, in front



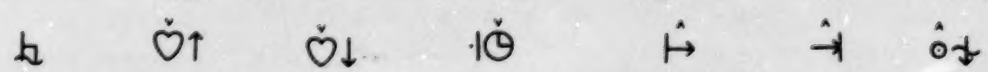
3. Internationally recognised symbols are also included, such as numbers, mathematical signs, punctuation, etc:

he, him and not when electricity



These basic symbols can be combined to convey more complex ideas:

toilet happy sad early begin stop cry



(V above a symbol makes it an adjective and Λ makes it a verb).

The Bliss system is mostly used by people with speech defects and with physical disabilities, often combined with mental handicaps. The way Bliss is used varies from person to person and is related to age, the level of development and the degree of physical disability.

Symbols can function as:

- an alternative to speech and writing
- a complement to speech or some other method of communication
- a means of developing language ability, e.g. in the case of retarded linguistic development.

The Bliss system was introduced in Sweden in 1976 and was tested on a small number of children and young people. Today, (1983), an estimated 700 people in Sweden use Bliss communication.

Bliss communication has led to a new life for many of these people, particularly those with severe multiple handicaps - they have become people with ideas of their own; a force to be reckoned with!

BEST COPY AVAILABLE

Kerstin Falck, Speech Therapist

PIC (PICTOGRAM, IDEOGRAM, COMMUNICATION)

PIC is a graphic method of communication which was first introduced in Sweden at a summer course for teachers in schools for handicapped children in 1981. This system of symbols originated in Canada and was designed by the speech therapist, Subhas C. Maharaj and was tested at an institute for mentally handicapped yound people.

PIC stands for:
Pictogram - pictorial symbols

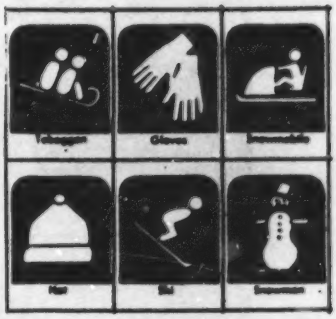
Ideogram - based on ideas

Communication

BEST COPY AVAILABLE

The symbols are stylised but depict the real world. They are clearly drawn in white on a black background. The material consists of 400 symbols printed on strong cardboard and as stickers to be glued onto a chart. A printed chart complete with the symbols is also available. The symbols are arranged in concept groups on the chart to make the system easy to use. The PIC symbols are easy to understand and can be used at a low level of abstraction by mentally handicapped people. The symbols are very clear - they can be seen by children with impaired or poorly developed sight.

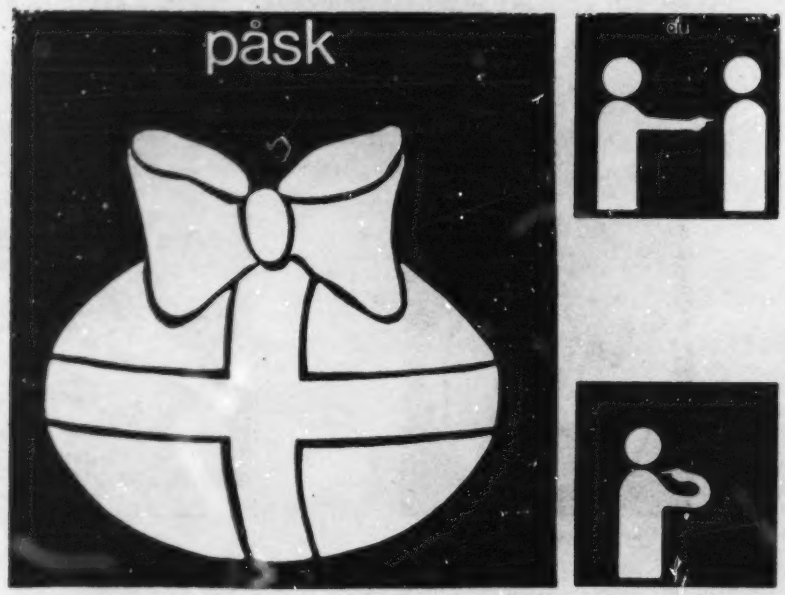
Halloween



Under an agreement between S. Maharaj and the Swedish Institute for the Handicapped, PIC is to be translated into Swedish, adapted and published by RPH-SAR in Umeå. Because of the special character of this method of communication, some symbols must be changed or replaced, for example the Halloween symbol is not needed in Sweden, while we certainly need a symbol for Midsummer.

The "Yes-Correct symbol is our sign for "Wrong", and is to be replaced with the "thumbs up sign.

The first Swedish version is to be published as 400 symbols printed as 10 x 10 cm picture cards and as 3 x 3 cm stickers to use with a communication chart which will take 228 symbols.



The instruction handbook will also be translated and adapted.

Our experience of PIC in Sweden is still very limited, but the following points of view have emerged:

PIC

- Can be an alternative for people without speech who need a graphic method, but cannot manage the high level of abstraction of Bliss.
- Can be a gateway and a complement to Bliss.
- Can constitute a link between different methods of communication, for example, Bliss and signs.
- Can be used as a "reading and writing" method for people who cannot read. The symbols are easy to copy and could be used for schematic writing, instructions for use for products, as door signs etc. They can be read as "picture-words".
- Can be used as an easily-accessible communication aid with patients suffering from central speech defects - aphasia.
- Should work in communication with immigrant children from language minority groups.

Lasse Hjelm, Music Instructor:

FUNCTION-ORIENTED MUSIC THERAPY
MUSIC AS AN AID
A MUSIC PROJECT WITH GOALS
BEYOND MUSIC

Music used as motivation to work with one's body to raise its functional level. Music as the source of stimulus for this activity, which is entirely based on one's personal ability.

Harnessing the forces of music and joy when working on the motor apparatus, posture (physical control/awareness), breathing, co-ordination and the fine motor apparatus, by making use of music's inherent structures and tensions to unlock the individual's creative powers and resources.

Using music to coax people into producing spontaneous expressions and movements - expressions that can subsequently be organised to help the individual.

Using music to promote deeper concentration versus relaxation.

Using music to raise attention levels and increase stamina.

Integrating music with instruction and information, e.g. through song lyrics, to create a favourable climate for fruitful contact/communication /dialogue.

Strengthening self-esteem, and thus self-confidence, by means of musical activities and interaction(without demands).

Using recurring musical structures to make use of the association and memory functions to structure individual behaviour patterns.

With music,creating situations which can promote a development of an active expression of experiences and emotions.

Constantly adjusting the level of presentation of these musical structures so that they suit the recipient, thus giving them music, like speech, as an asset to help their personal development.

All the above is done in the hope that the individual will acquire experience - maturity - which will benefit him or her in everyday life.

In music, one CAN succeed - WILL succeed - SUCCEED TOGETHER!

MUSIC USE AS A MOTIVATION TO WORK WITH ONE'S BODY TO RAISE ITS FUNCTIONAL LEVEL. MUSIC AS THE SOURCE OF THIS ACTIVITY, ENTIRELY BASED ON ONE'S PERSONAL ABILITY.

We must, very briefly, consider how we can use music as an aid in the treatment, training and/or the development of an individual.

Consider how we can build musical models and structures (codes), with therapist and student working together, that is to say, by means of simple interaction, which must, of course, be adapted to suit each individual. Interaction which is free from all demands on the student, where the word demand is replaced by the word expectations.

We must consider how the body will act in a process which does not originate in AWARENESS; rather from spontaneous action "from within". We must also consider how long-term planning can help the individual to develop/improve his functional process

HARNESSING THE FORCES OF MUSIC AND JOY WHEN WORKING ON THE MOTOR APPARATUS, POSTURE, (PHYSICAL CONTROL/AWARENESS) BREATHING, CO-ORDINATION AND THE FINE MOTOR APPARATUS, BY MAKING USE OF MUSIC'S INHERENT STRUCTURES AND TENSIONS TO UNLOCK THE INDIVIDUAL'S CREATIVE POWERS AND RESOURCES.

We must also consider ways of using music to create the sense of security and of curiosity which is needed to stimulate body movement (small or large), leading to new discoveries and experiences. Experiences which are essential to human development.

We must try to think of ways of using wind instruments to alter and improve breathing; a particularly important factor in individual wellbeing.

USING MUSIC TO COAX PEOPLE INTO PRODUCING SPONTANEOUS EXPRESSIONS AND MOVEMENTS - EXPRESSIONS THAT CAN SUBSEQUENTLY BE ORGANISED TO HELP THE INDIVIDUAL.

We must try to find out a great deal more about the models and structures which evoke expressions and try to analyse the responses we can coax from people - responses that are always to be found in our students - responses that are, in themselves, muscular activity.

We must try to find the link between our models/structures and the reactions of our students.

USING MUSIC TO PROMOTE DEEPER CONCENTRATION VERSUS RELAXATION.

Here, we must try to find links between listening and, among other things, long notes, sounds and not least, pauses.

USING MUSIC TO RAISE ATTENTION LEVELS AND INCREASE STAMINA.

Since time immemorial, sound - notes, in the form of signals, have been important to mankind. They have attracted attention , lured, warned and fascinated. We should explore the wealth of signals we have at

our disposal. We must also study the traditional forms of "getting together" with music; a field full of self-evident benefits we must make use of. The simple companionship of playing or singing together in fact requires nothing more than that we start together and finish together. Already here we find support for the abovementioned theory. The "long notes" and pauses are important here, which, among other things, we must study in detail later.

INTEGRATING MUSIC WITH INSTRUCTION AND INFORMATION, E.G.THROUGH SONG LYRICS, TO CREATE A FAVOURABLE CLIMATE FOR FRUITFUL CONTACT/COMMUNICATION /DIALOGUE.

A major factor in people's concentration problems is the extent to which they are able to "take in" multiple stimuli simultaneously. Later on, we must consider ways of "getting home" with our information, by using, for example, the song lyric format.

STRENGTHENING SELF-ESTEEM, AND THUS SELF-CONFIDENCE, BY MEANS OF MUSICAL ACTIVITIES AND INTERACTION (WITHOUT DEMANDS).

Here, we must consider ways of building up interaction, centred round our student, an interaction that makes no demands on the student, but generates a feeling of "being able to do something", "succeeding", 'being of some use".

USING RECURRING MUSICAL STRUCTURES TO MAKE USE OF THE ASSOCIATION AND MEMORY FUNCTIONS TO STRUCTURE INDIVIDUAL BEHAVIOUR PATTERNS.

Here, we must utilize the "responses" mentioned earlier. By returning to known structures, we can expect to repeat the same responses at the next session. If we build on this phenomenon, we find ourselves in the phase of "organising" an extended reaction pattern; our models open up new opportunities and, in a long-term planned development, cover a greater number of functions.

WITH MUSIC,CREATING SITUATIONS WHICH CAN PROMOTE A DEVELOPMENT OF AN ACTIVE EXPRESSION OF EXPERIENCES AND EMOTIONS.

As human beings, we must constantly be able to give vent to our feelings - react and express ourselves. Music provides us with a wealth of opportunities to express our needs and emotions. We must give our students the chance to make their presence felt - we must encourage and reward them when they let off steam. We must create (together) on the spur of the moment, acting from the "here and now".

Our task is not to teach them or to bring them up; we must release, develop and build on what is already there, making full use of each student's inherent resources.

CONSTANTLY ADJUSTING THE LEVEL OF PRESENTATION OF THESE MUSICAL STRUCTURES SO THAT THEY SUIT THE RECIPIENT, THUS GIVING THEM MUSIC, LIKE SPEECH, AS AN ASSET IN THEIR PERSONAL DEVELOPMENT.

Here, we must give serious consideration to the size of the "dose" of music we can give to our pupils. It is extremely important for us to find out as much as we can about each person's level of experience and expectations, let us call it their code level. We have to establish a reliable "process of assimilation", suited to each individual,and make sure that the rate at which we raise the level is equally well- suited so that, as with speech, music becomes for them the asset it should be for everyone.

We must also consider ways of creating deeper contact - a "relationship" with our students, a relationship which is a precondition for working together in therapy.

Our co-operation must also lead to a transfer effect aimed at making individual contact with other people easier, for example the daily socialising with people at school.

As I see it, musical therapy is a complement to instruction and the usual supportive activities that are commonly found,for example, at school.

Music therapy as a form of treatment can be presented so that the people taking part do not perceive therapy as compulsory and rigorours training.

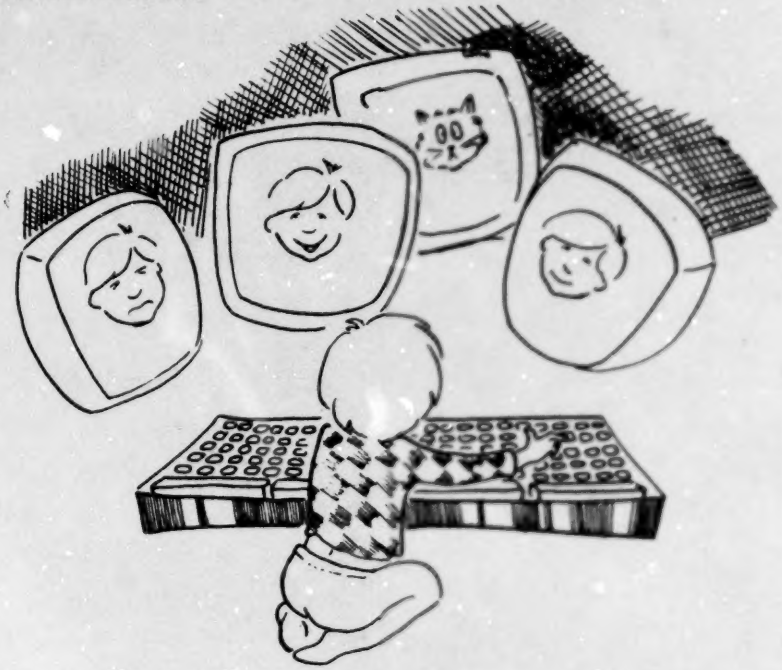
MUSIC IS FUN!

For people with'problems' (some kind of handicap), failure is never far away (peraps a whole series of failures) - in music you CAN succeed - you MUST succeed - SUCCEED TOGETHER!

NO DEMANDS - JUST EXPECTATIONS
MUSIC STIMULATES RESPONSE - YOU KNOW WHEN YOU SUCCEED - THAT IS THE JOB OF A THERAPIST - TO SEE THAT STUDENTS SUCCEED.

Magnus Magnusson, Speech Therapist

DATA COMMUNICATIONS



We can still often hear people say: a computer, oh, that's complicated. But what are we really talking about when we are on the subject of computers. Really,a computer is nothing more than a box containing a lot of facts and some rules governing the way those facts are processed. In other words, a sort of memory box. And there's nothing very strange about that.

What is"strange", or rather, remarkable, becomes apparent when we begin to study in detail what this "memory box" can actually do. In the never-ending debate on computers we can hear every imaginable opinion, ranging from 'computers will eliminate one third of all jobs', to 'computers will help us to get rid of all boring and monotonous jobs'; which could be one and the same statement, or at least two versions of the same course of events. No matter, the computers debate is comprehensive and, at times, heated and one thing seems to be clear to us all: that things will never be the same again. We are living in the year 30 AD (= anno data).

All people and all technology are affected by computers - and this includes the handicapped and their aids. A machine which can remember a lot of facts and process and combine these facts must be of interest to anyone who has any type of reduced ability.

So far, the short history of computerised handicap aids has been dominated by the need to compensate for physical disabilities, by means, for example, of advanced technological applications for regulating one's surroundings, steering devices for wheelchairs and communications systems like the DESK-80.

Even in the early stages of discussing computers in the context of handicaps (for example, the INKA - conference, Södertälje, 1982), many people held the opinion that we should ensure that all computerized systems introduced into the community, such as the banks' automatic cashpoints should be designed to suit people with various types of disability. This also applies particularly to all the Swedish Telecommunications Service products.

It is hard not to let the imagination run riot in an azure haze where computers make everything possible.

Gunnel Thunell, Speech Therapist:

A REPORT ON A VISIT TO THE USA

From 24/5 - 3/6, 1983, I had the privilege of visiting the USA as a representative of the Swedish Institute for the Handicapped to learn as much as possible about the work done in America on early communication, and to attend a conference.

EAST LANCING, MICHIGAN
Our first visit was to DR. JOHN EULENBERG at his Artificial Language Laboratory, Michigan State University in East Lancing, Michigan.

Dr. Eulenberg is developing computerized aids with synthetic speech. The patients who come to him to test aids have usually been recorded on video tape at their homes so that Dr. Eulenberg can get some idea of the motor ability the patient has to control his or her aids. He develops aids for children as young a five and follows his patients as the grow, develop ng their aids to suit their needs and abilities.

Here, as in other places we visited during our trip, I got an impression of the general attitude the Americans have towards helping the handicapped. Most of the finance comes from foundations and charities.

There is some national and federal financial support but further support from funds is necessary, so ideas for aids have to be "sold" in order to get finance. Among other ways, this is done by using rather sentimental video films of children and adults with various handicaps, and the aids they use. I also encountered here a general attitude towards disabilities and the mentally retarded. A clear difference is made between these groups, and far more resources are made available to the physically disabled and their aids. In some cases a child with a physical disability is not diagnosed as mentally retarded. Co-ordinated rehabilitation is a thing of the future in America!

While in East Lancing I also had the opportunity of meeting Laura Mayers Ph.D., a visiting research linguist from California. Her work is with mentally disturbed children and autistic children who don't speak. She has developed training programmes for these children, which include communication aids. Her work aims at total communication for the children (speech-gestures and body language). She has, however, found that a speaking aid that gives the child a direct auditory feedback is by far the best promotor of language development. This is particularly noticeable in children with Down's syndrome. I asked her how children reacted to a purely male synthetic voice, and she replied that the children had not shown a negative reaction. The computerised aid she uses has the Apple computer as a base. Since she works with very young cp children with poorly developed motor apparatus, she selects a word the child will be strongly stimulated by (in the case I saw in the video film), for example, sing. The apparatus produced the word sing no matter where the child touched the key, which is about 35 x 35 cm. The video film showed clearly that the child began by touching the key quite involuntarily, but it soon began to try more often and in a more deliberate fashion. Laura Meyers thinks that this kind of aid can be introduced from the age of 18 months.

OMAHA, NEBRASKA

I went to Omaha to meet the speech therapist Faith Carlson at the Meyer Rehabilitation Center. In her opinion, it was important to explain to parents at a very early stage about the factors which

could prevent the development of the child's communicative ability, as well as introducing the parents to the idea that communication is more than just language and speech. Faith Carlson also thinks that if one chooses to provide the child with a communications system, such as a board or some other device, it has to be introduced as a toy which can stimulate the child to begin to use it. She had also developed a large number of simple toys which had been adapted as communication aids.

Her work with children who do not speak has brought Faith Carlson to the realisation that Bliss symbols are far too abstract for young children. So she has developed a simpler system of symbols which can be seen as a waystage to Bliss symbols. She calls her system Picsyms. The system is entirely pictorial, but stylised, which allows users to make their own symbols within a given framework. Some of the symbols are similar to the Bliss symbols, but are more clear. One can also transfer from the clearer system to the more abstract Bliss system. Picsyms allows certain syntax but it is thought that the young children this system is intended for have not developed syntax sufficiently for them to require more advanced forms of communication. Faith Carlson emphasises that the symbols should follow the needs and developments of the child.

DALLAS, TEXAS

We went from Omaha to Dallas, Texas where the AAMD (American Association for Mental Deficiency) held its 107th annual conference. The conference lasted for 2 1/2 days and dealt simultaneously with some 20 areas, among them, medicine, institutionalised/private accommodation, finance, laws and ordinances, psychology and leisure. Worth mentioning among the lectures was a study of EARLY TREATMENT. A follow-up study on mentally retarded children was carried out in Washington. The NCAST scale was used to make an appraisal of the child in a number of areas: the motor apparatus, interaction, the child-parent relationship, etc. The findings were that:

1. It is important to commence purposeful work with the child before it is 6 months old,

2. training should be given by parents and professionals together.,
3. the objective of the training is to normalise the child
4. each child and family must have its own programme.

The general impression given by the lectures dealing with COMMUNICATION was that most pf the research and resources were in the area of gestures - signs. Projects have been carried out on the severely mentally retarded; they have dealt with ways of getting patients to take the initiative in communication, which gestures are easiest to learn and retain in the memory, which concepts have the greatest semantic significance, the structure of the gestures etc.

While at the conference I also had the opportunity of visiting Callier Centre, an institution for children and young people who are deaf and have severe speech defects. There was also a department for mentally retarded and autistic young people.BOB STILLMAN, a psychologist, works with these youngsters. He has developed a teaching system and an appraisal table which is based on Van Dykes' principles. Physical contact and the imitation of movements and behaviour were prominent in his work. Situations were very structured and the exercises very similar to those described by Lille Nielsen and Kurt Vinterhöj. Video tape recordings are made frequently and the patients' behaviour and any changes are discussed.

SUMMARY

In summarising my thoughts after the trip to the USA, the following are among the most prominent:

- We are more advanced in Sweden in regard to general attitudes towards people with motor and mental handicaps. Integration is just being introduced in the USA. Co-ordinated habilitation still lies in the distant future.

- The greater part of the financial and social support still comes from charities and private funds and initiatives.

- Although technology is highly developed in certain areas, computerized technical aids are available only to the few patients who are helped by researchers.

- Gesture-sign language is the most common alternative form of communication.

- Total communication is the slogan.

- Ordinary toys are frequently adapted for use in communication training.

- There is verification of the theory that early training is extremely important for individual development.

- Early intervention is primarily in the form of teaching and support of the parents.

- Picsyms - a simple symbol system is a waystage to the use of Bliss symbols.

- There are advantages in the use of video recording.

THE HAND I KNOW

Two o'clock.
Someone turned me on my back
but not the person I expected.
Four o'clock.
Someone turned me on my side
but not the hand I know
not the gentle voice
Six o'clock.
Someone turned me on my tummy
but not the hand I know
not the gentle voice
not the pat on the cheek.
I want to ask ? I blink .....
I hit the bedrails
I don't swallow food from the angry hand
Don't like!
Want to shout! Where is she?
shake the bed!
The angry hand turns me at four o'clock.
Hand I know, gentle voice, pat my cheek, come
Bang my head on the bed come
Bang my head on the bed come
Angry voice: don't bang,
bang - come - bang - come
Angry voice: don't bang.
Gulp for air, air helps me cry out
the great cry:
come, hand I know.....
Angry voice: Be quiet, don't be a nuisance!
Quiet!
Not the hand I know

Only the angry voice
Won't!
The hand I know is gone!
At 8 o'clock the angry hand comes
turns me on my side.
Air helps me cry out
Hand I know coooooooome...
Long time.
Hand I know, come!
Wanted to say that I liked
Wanted to tell the hand I know!
You answered, a pat on my cheek
I smiled, you caressed me
I smiled, you turned me
You knew I wanted to lie
on my right side at 12 o'clock
because that's when the sun
dances in the big tree!
You know! what I want
Angry hand is gone....
now the sun is dancing
you know which side I like
at twelve o'clock.

Ulla Tideström

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PIC-MATERIALS

The literature and the full range of materials can be ordered from:
The George Reed Foundation for the Handicapped
P.O. Box547
Regina
Saskatehewan
Canada
Price: ca. 100 Canadian Dollars.
For information on the Swedish version of the PIC materials, contact:
Anita Hɑlst, translator and producer of educational materials, or
Catherin Sahlander, illustrator:
RPH-Sär
Mariehemsvägen 2
902 36 Umeå
Sweden.

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Riksförbundet FUB (The National Association for Retarded Children. Young People and Adults) is a national organisation working with and on behalf of the mentally retarded and their families. Over 25 000 members are organised in 132 local societies, and the provincial and national associations. The 65 youth sections have about 4 000 members in total. The FUB promotes and safeguards the interests of the mentally retarded through its widespread contacts with the authorities at all levels, among other things. The membership and general public receive information through FUB publications, brochures, books, etc. The FUB journal, FUB-Kontact and the publication Steget are published in easy Swedish. The FUB's foundation, the ALA (adaption to Life and Work) carries out research in the field of the mentally retarded.

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Handikappinstitutet (The Swedish Institute for the Handicapped) is the national body responsible for aids for the handicapped. The Institute conducts surveys, R & D, provides training and information and carries out tests of handicap aids,as well as infrastructure planning for people with reduced abilities. The Institute adapts vehicles for disabled drivers. The Institute is financed by central and local government funds.

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